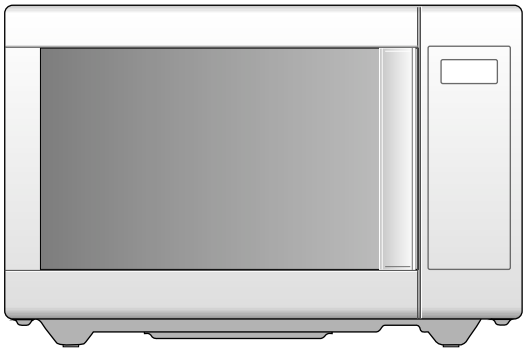
S/M No. : R1A7G 9T001

Service Manual

Microwave Oven

Model : KOR-1A7G



• Caution:
In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (http://svc.dwe.co.kr).

April 2006

DAEWOO ELECTRONICS

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(a) Do not operate or allow the oven to be operated with the door open.

(b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.

(c) Before turning on power to the microwave oven for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.

(d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.

(e) A microwave leakage check to verify compliance with the federal performance standard should be performed on each oven prior to release to the owner.

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SAFETY AND PRECAUTIONS

CAUTION

This device is to be Serviced only by Properly Qualified Service Personel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.
IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.
(Only a competent service personnel should make repairs.)

(1) A broken door hinge.
(2) A broken door viewing screen.
(3) A broken front panel, oven cavity.
(4) A loosened door lock.
(5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.
No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.
DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN.
The microwave oven has concealed switches to make sure the power is turned off when the door is opened.
Do not attempt to defeat them.
DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. FOR SAFE SERVICE PROCEDURES

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to have excessive emission level 5mw/cm^2, the service person should:
   (a) inform the manufacturer, importer or assembler,
   (b) repair the unit at no cost to the owner,
   (c) attempt to ascertain the cause of the excessive leakage,
   (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3. If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer and CDRH immediately.

CAUTION

MICROWAVE RADIATION

PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON OR OTHER MICROWAVE GENERATING DEVICE IF IT IS IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS. WAVEGUIDE FLANGES AND GASKETS MUST BE SECURE. NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE ENERGY ABSORBING LOAD ATTACHED. NEVER LOOK INTO AN OPEN SAVEGUIDE OR ANTENNA WHILE THE DEVICE IS ENERGIZED.

SPECIFICATIONS

MODEL		**KOR-1A7G9T (AKM3180S)**
POWER SUPPLY		110V-60Hz, SINGLE PHASE WITH EARTHING
POWER CONSUMPTION	MICROWAVE	1400W
	GRILL	
	COMBINATION	
MICROWAVE ENERGY OUTPUT		1000W
MICROWAVE FREQUENCY		2450MHz
OUTSIDE DIMENSIONS (W X H X D)		539 x 300 x 431mm (21.2 x 11.8 x 16.1 in)
CAVITY DIMENSIONS (W X H X D)		354 x 228 x 373 mm (13.9 x 9 x 14.7 in)
NET WEIGHT		APPROX. 15.8 kg (34.9 lbs.)
TIMER		99 min. 99 sec.
FUNCTION SELECTIONS		MICROWAVE
POWER SELECTIONS		10 LEVELS
CAVITY VOLUME		31 L

** SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

EXTERNAL VIEW

1. OUTER DIMENSION

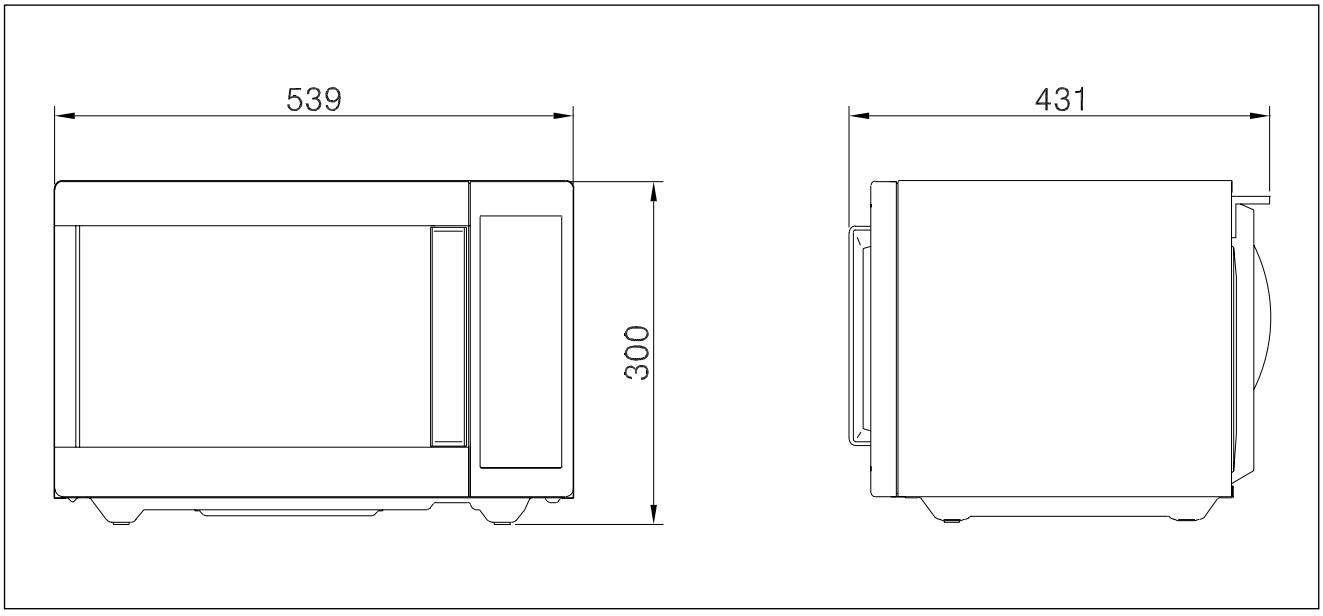
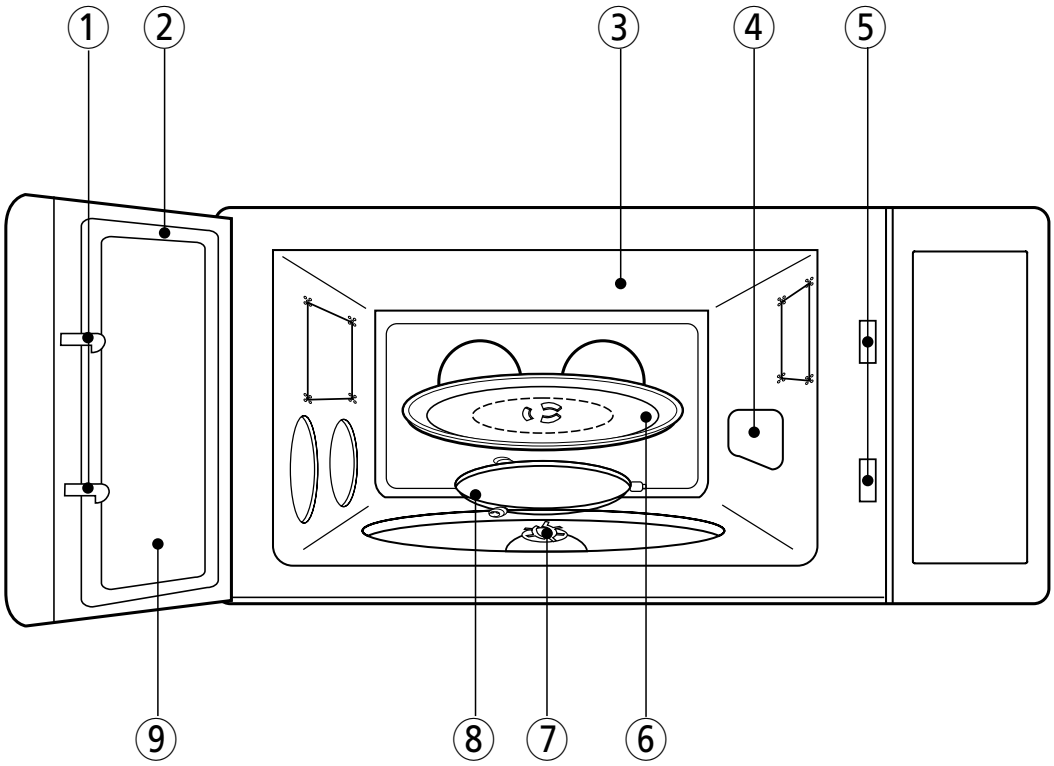
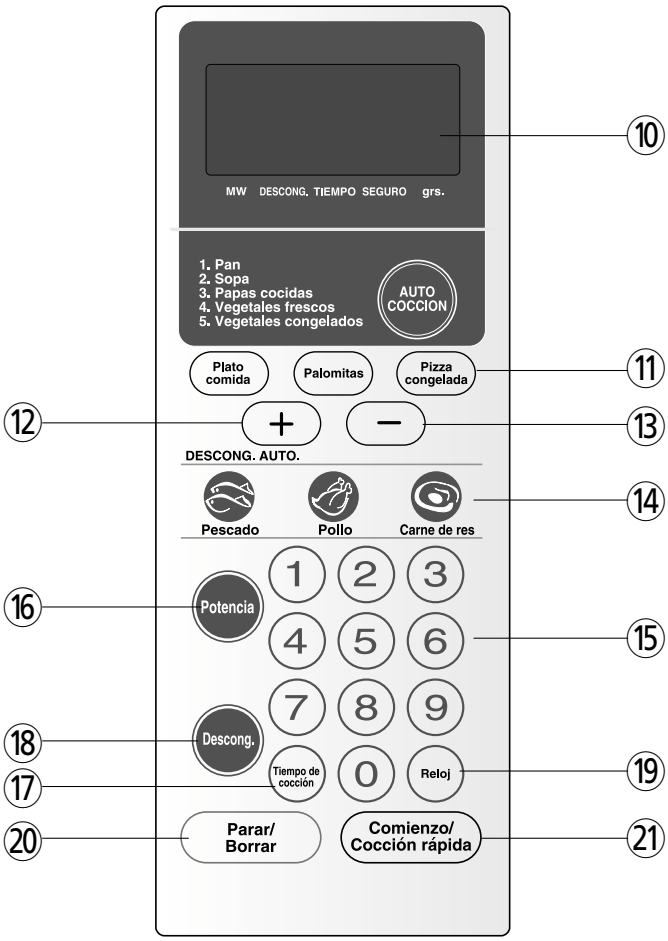


DIAGRAMA DE CARACTERISTICAS



1. **Ganchos del seguro de la puerta** - Este horno funciona solamente cuando la puerta está cerrada totalmente. Si se abre la puerta, el horno deja de funcionar y de producir microondas, hasta que la puerta se vuelve a cerrar.
2. **Sello de la puerta** - Este sello mantiene a las microondas dentro de la cavidad y asimismo previene la fuga de éstas.
3. **Cavidad del horno**
4. **Cubierta protectora** - Evita que la salida de las microondas se salpique cuando los alimentos se cocinan.
5. **Sistema de sujeción con seguro** - Previene que el horno funcione mientras la puerta se encuentra abierta.
6. **Plato de cristal** - Fabricado con cristal especial, resistente al calor. El plato siempre debe colocarse en su eje antes del funcionamiento. No cocine los alimentos directamente sobre el plato.
7. **Eje** - En este eje debe ajustar el plato de cristal para que pueda girar durante la cocción.
8. **Anillo** - Sostiene al plato de cristal para que este pueda girar.
9. **Ventanilla de puerta** - permite observar los alimentos. Esta ventanilla ha sido diseñada para permitir la vista al interior de la cavidad y al mismo tiempo impedir la salida de las microondas.

DIAGRAMA DE CARACTERISTICAS (CONTINUACIÓN)



10. Display (Pantalla) - Muestra el tiempo de cocción, indicador de nivel de potencia y tiempo actual.

11. One touche (Un toque) - Usado para calentar o recalentar cantidades específicas de comida.

12. More (Mas) - Usado para agregar tiempo de cocción.

13. Less (Menos) - Usado para quitar el tiempo de cocción.

14. Auto Defrost (A: Descong) - Usado para descongelar comida (por peso).

15. Time set pad (Botones de ajuste de tiempo) - Usado para ajustar el tiempo de cocción y el tiempo actual.

16. Power (Potencia) - Usado para ajustar el nivel de potencia.

17. Kitchen Timer (Tiempo de cocinado) - Usado en minutos y puede retrasar el tiempo programado después de cocinar.

18. Defrost (Descong) - Usado para descongelar comida.

19. Clock (Reloj) - Usado para ajustar el reloj.

20. Stop/Clear (Paro/Limpiar) - Usado para detener la operación del horno o borrar datos de cocción.

21. Start/Speedy cook (Inicio/Cocción rápida - Usado para iniciar el horno y puede utilizarlo para ajustar el tiempo de de recalentado.

INSTALLATION

1. Steady, flat location.

This microwave oven should be set on a steady, flat surface.

2. Leave space behind and side.

All air vents should be kept a clearance. If all vents are covered during operation, the oven may be overheated and, eventually, cause oven failure.

3. Away from radio, and TV sets

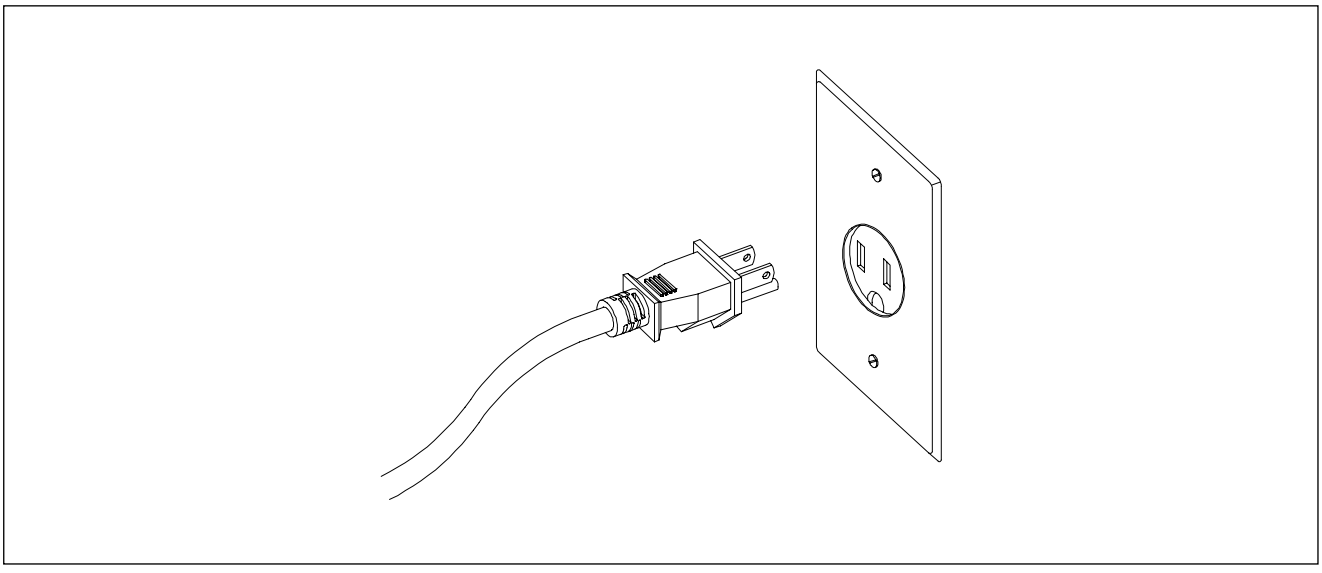
Poor television reception and radio interference may result if the oven is located close to a TV, radio, antenna, or feeder and so on.

4. Away from heating appliances and water taps

Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

5. Power supply

- Check your local power source.
  This microwave oven requires a current of approximately 20 amperes, 110Volts, 60Hz grounded outlet.
- Power supply cord is about 1.0 meters long.
  1. A short power-supply cord is provided to reduce the risks resulting from becoming entangled in or tripping over a longer cord.
  2. Longer cord sets or extension cords are available and may be used if care is exercised in their use.
  3. If a long cord or extension cord is used:
     1) The marked electrical rating of the cord set or extension cord should be at least as great as the electrical rating of the appliance.
     2) The extension cord must be a grounding type 3-wire cord.
     3) The longer cord should be arranged so that it will not drape over the counter top or tabletop where it can be pulled on by children or tripped over unintentionally.



6. Examine the oven after unpacking for any damage such as:

A misaligned door, broken door or a dent in cavity.
If any of the above are visible, DO NOT INSTALL, and notify dealer immediately.

OPERATIONS AND FUNCTIONS

1. Connect the mains lead to an electrical outlet.
2. After placing the food in a suitable container, open the oven door and put it on the glass tray. The glass tray must always be in place during cooking.
3. Close the door securely.
4. When the oven door is opened, the light turns on.
5. The oven door can be opened at any time during operation by pushing the door release button on the control panel.

   The oven will automatically shut off. To restart the oven, close the door and then touch START pad.
6. Each time a pad is touched. a BEEP will sound to acknowledge the touch.
7. The oven automatically cook on full power unless set to a lower power level.
8. The display will show : 0 when the oven is plugged in.
9. Time clock returns to the present time when the cooking time ends.
10. When the STOP/CLEAR pad is touched during the oven operation, the oven stops cooking and all information retained.

    To erase all information (except the present time), touch the STOP/CLEAR pad once more. If the oven door is opened during the oven operation, all information is retained.
11. If the START pad is touched and the oven does not operate, check the area between the door and door is closed securely. The oven will not start cooking under the door is completely closed or the program has been reset.

Make sure the oven is properly installed and plugged into the electrical.

Wattage output chart

The power level is set by touching the POWER pad. The chart shows the display, the power level and the percentage of power.

Touch POWER Pad	Power Level(Display)	Approximate Percentage of Power
Once	P-HI	100%
Twice	P-90	90%
3 times	P-80	80%
4 times	P-70	70%
5 times	P-60	60%
6 times	P-50	50%
7 times	P-40	40%
8 times	P-30	30%
9 times	P-20	20%
10 times	P-10	10%
11 times	P-00	00%

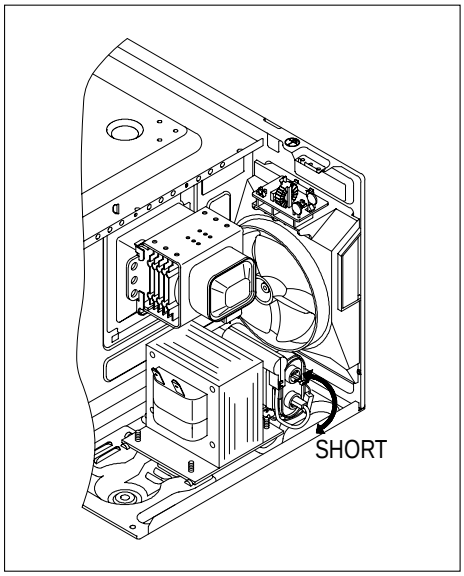
DISASSEMBLY AND ASSEMBLY

Cautions to be observed when troubleshooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment.
It is completely safe during normal operation.
However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit.
You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and ware rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

   (1) Check the grounding.
   Do not operate on a two-wire extension cord.
   The microwave oven is designed to be used while earthed.
   It is imperative, therefore, to make sure it is earthed
   properly before beginning repair work.
   (2) Warning about the electric charge in the high voltage capacitor.
   For about 30 seconds after the operation stopped and electric charge remains in the high voltage capacitor.
   When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screwdriver to discharge.



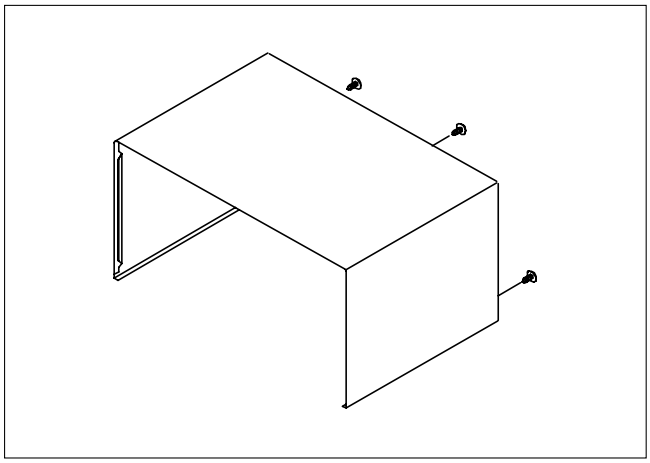
4. When the 20A fuse is blown out due to the operation of the monitor switch; replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
6. Do not operate without cabinet.

CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

WARNING : When servicing the appliance, need a care of touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - HV Transformer, Magnetron, HV Capacitor, HV Diode, HV fuse.

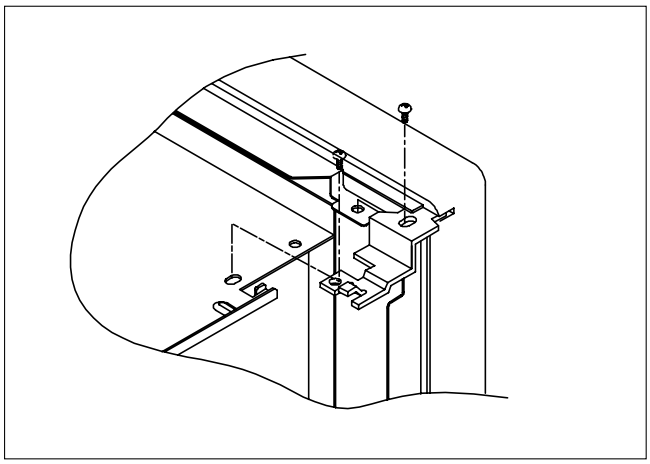
1. To remove cabinet

1) Remove three screws on cabinet back.
2) Pull the cabinet backward.



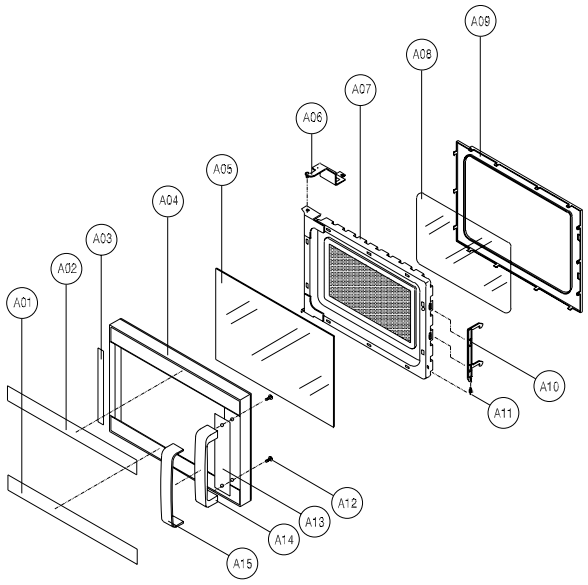
2. To remove door assembly

1) Remove two screw which secure the stopper hinge top.
2) Remove the door assembly from top plate of cavity.
3) Reverse the above for reassembly.



NOTE : After replacing the door assembly, perform a check of correct alignment with the hinge and cavity front plate.

3. To remove door parts.

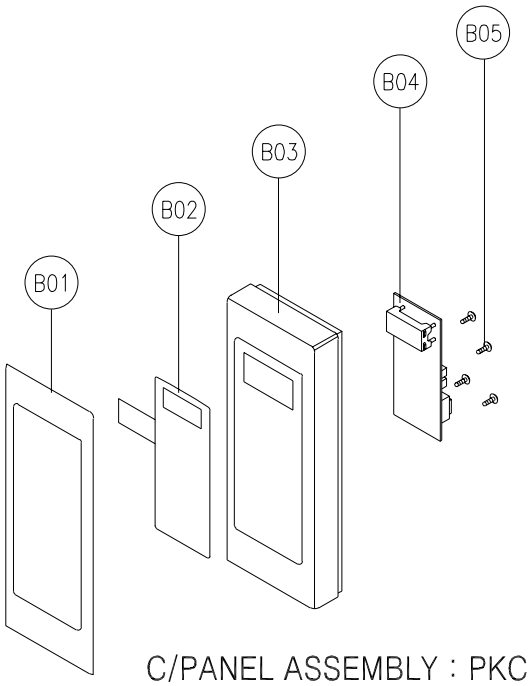


DOOR ASSEMBLY : 3511711270

REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3511604730	DECORATOR DOOR *U	SUS430 T0.5 H/L	1	
A02	3511604720	DECORATOR DOOR *T	SUS430 T0.5 H/L	1	
A03	3511609510	DECORATOR DOOR *L	SUS430 T0.5 H/L	1	
A04	3512204370	FRAME DOOR	ABS XR-401 SR-0320G	1	
A05	3517005930	BARRIER-SCREEN *O	TEMP GLASS T3.2, NO PRINT	1	
A06	3515202900	STOPPER HINGE *T AS	KOR-121M0A	1	
A07	3511711300	DOOR PAINTING AS	KOR-1A1G0A	1	
A08	3517005800	BARRIER-SCREEN *I	PETP T0.1	1	
A09	3512301900	GASKET DOOR	PP 5113MF6	1	
A10	3513100730	HOOK	POM BLACK	1	
A11	3515101900	SPRING HOOK	PW-1	1	
A12	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1	
A13	3511609310	DECORATOR DOOR *R	SUS430 T0.5 H/L	1	
A14	3512602700	HANDLE DOOR *U	ABS XR-401 H-2938	1	
A15	3512602600	HANDLE DOOR *T	SUS304 T0.6 HAIR LINE	1	

(1) Remove the gasket door from door painting as.
(2) Remove the barrier screen inner from door painting as.
(3) Remove the frame door from door painting as.
(4) Remove the stopper hinge top form door painting as.
(5) Remove the spring and the hook door painting as.
(7) Remove two screws holding the handle.
(8) Remove the handle from frame door.
(9) Reverse the above steps for reassembly.

5. To remove control panel parts.

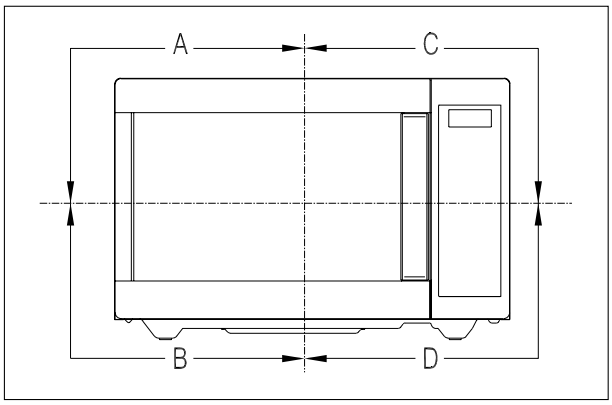


C/PANEL ASSEMBLY : PKCPSWA850

REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3511604850	DECORATOR C-PANEL	SUS430 T0.5 H/L	1	
B02	3518571900	SWITCH MEMBRANE	KOR-1A7G9T	1	
B03	3516727510	CONTROL-PANEL	ABS SG-175 SG-0760D	1	
B04	PKMPMSFK40	PCB MAIN MANUAL AS	1A(1000W,T,9,99)	1	
B05	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	4	

(1) Remove a screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
(2) Remove four screws which secure the PCB assembly to control panel.
(3) Disconnect membrane tail from the connector of the PCB assembly.
(4) Detach membrane from the control panel.
(5) Reverse the above steps for reassembly.

4. Method to reduce the gap between the door seal and the oven front surface.



(1) To reduce gap located on part 'A'
- Loosen two screws on stopper hinge top, and then push the door to contact the door seal to oven front surface.
- Tighten two screws.

(2) To reduce gap located on part 'B'
- Loosen two screws on stopper hinge under, and then push the door to contact the door seal to oven front surface.
- Tighten two screws.

(3) To reduce gap located on part 'C'
- Loosen a screw on interlock switch assembly located top of oven body.
- Draw the interlock switch assembly inward as possible to engage with hook on the door bottom.
- Tighten a screw.

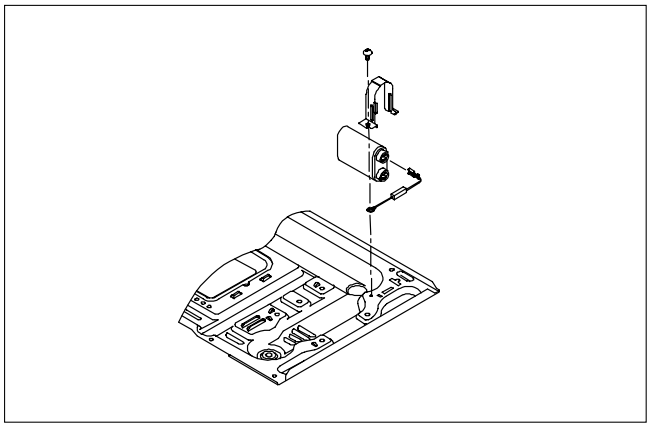
(4) To reduce gap located on part 'D'
- Loosen a screw on interlock switch assembly located bottom of oven body.

and (4) are same as step (3).

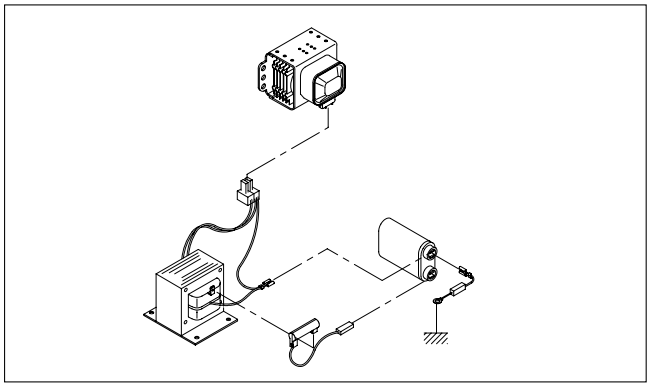
NOTE : A small gap may be acceptable if the microwave leakage does not exceed 4mW/cm^2.

6. To remove high voltage capacitor.

1) Remove a screw which secure the grounding ring terminal of the H.V. diode and the capacitor holder.
2) Remove the H.V. diode from the capacitor holder.
3) Reverse the above steps for reassembly.

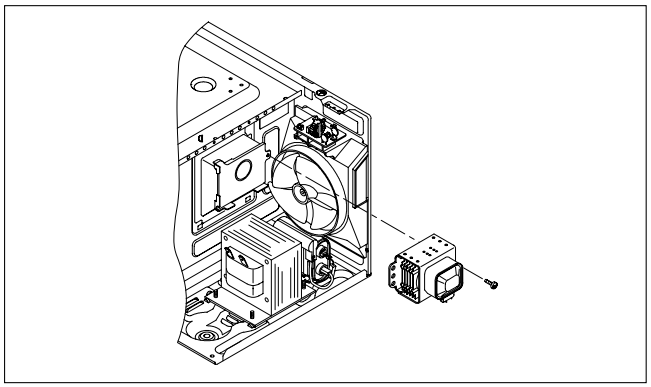


◆ High voltage circuit wiring

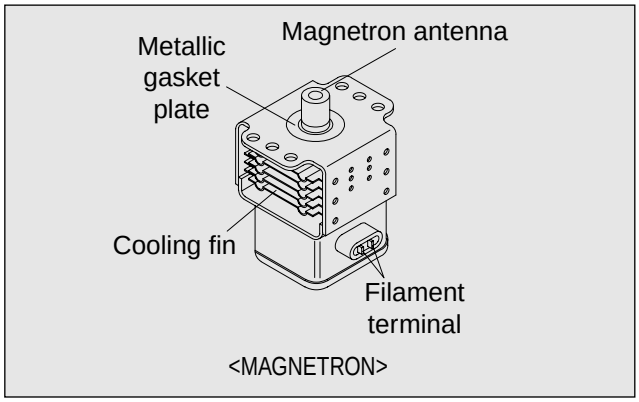


7. To remove magnetron.

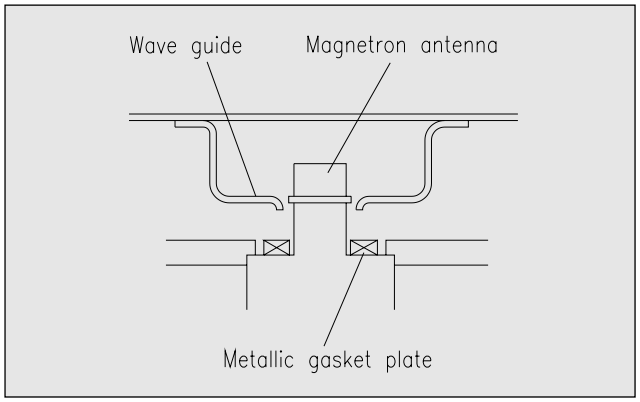
1) Remove a screw which secure the magnetron.
2) Remove the magnetron.
3) Reverse the above steps for reassembly.



NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed 4mW/cm^2 for a fully assembled oven with door normally closed.

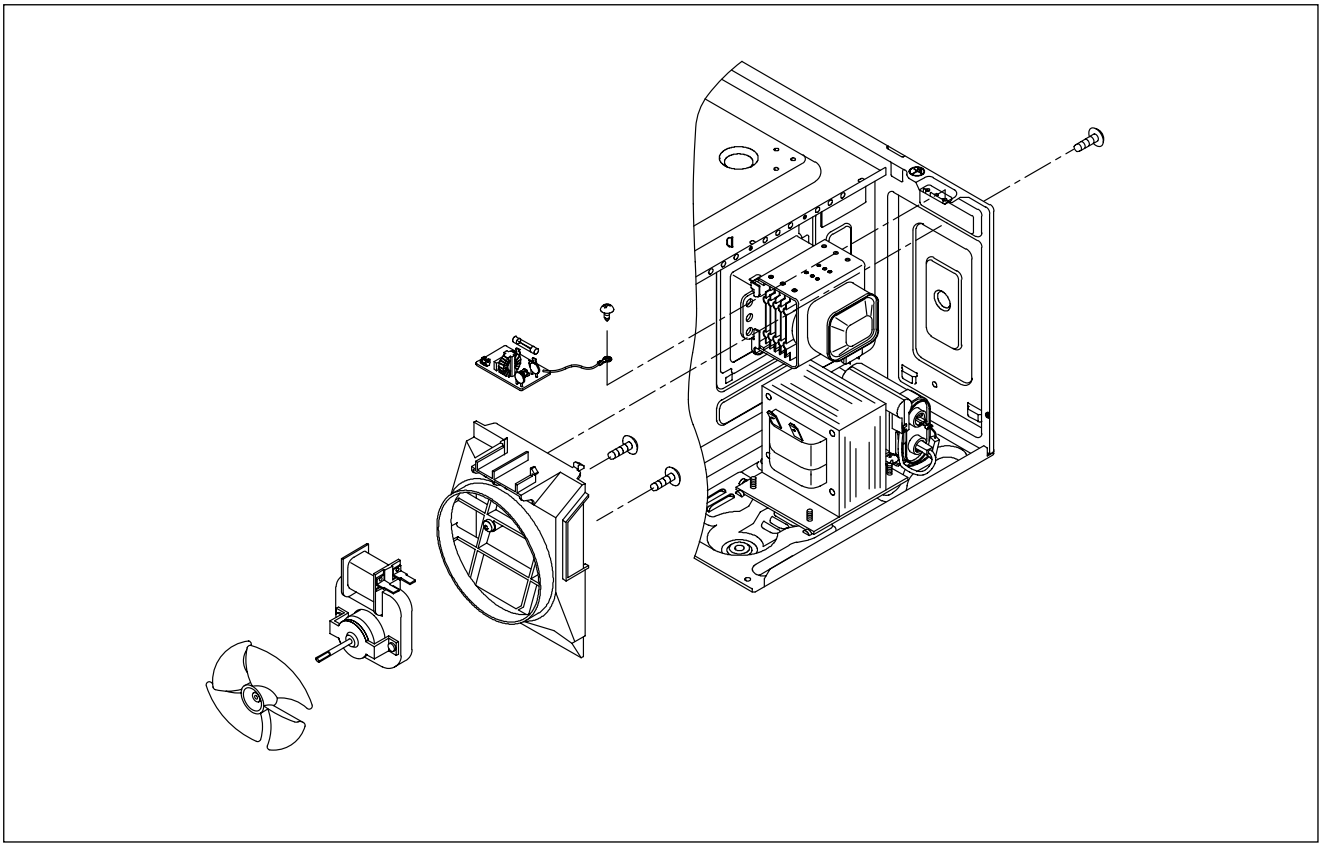


<MAGNETRON>



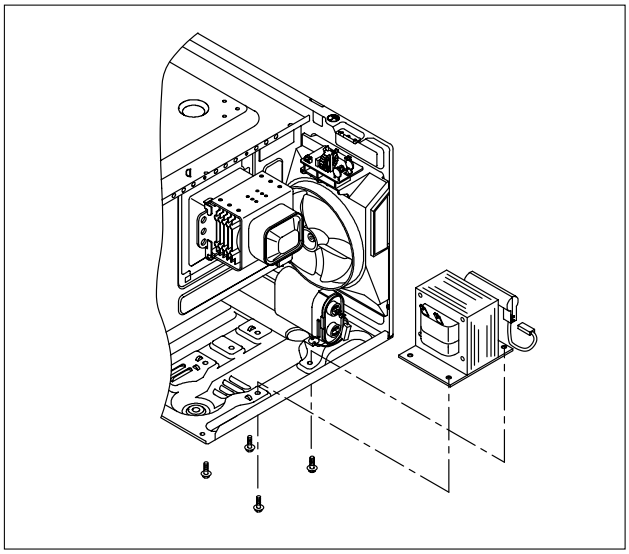
8. To remove wind guide assembly.

1) Remove a screw for earthing.
2) Remove the noise filter from the wind guide.
3) Remove a screw which secure the wind guide assembly.
4) Draw forward the wind guide assembly.
5) Pull the fan from the motor shaft.
6) Remove two screws which secure the motor shaded pole.
7) Remove the motor shaded pole.
8) Reverse the above steps for reassembly.



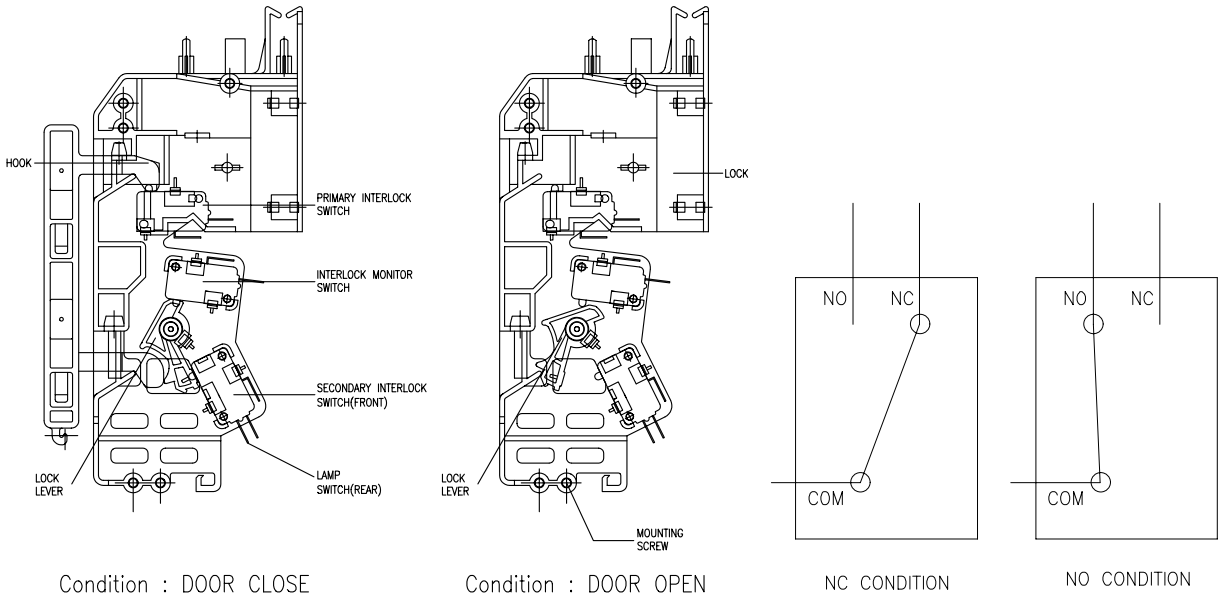
9. To remove H.V.transformer.

1) Remove four screws holding the H.V.transformer.
2) Remove the H.V.transformer.
3) Reverse the above steps for reassembly.



INTERLOCK MECHANISM AND ADJUSTMENT

The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.



(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly, the oven will not operate.

When the door is closed, the hook pushes the button of the microswitch. Then the button of the primary interlock switch bring it under NO condition.

(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the lock lever downward. The lock lever presses the button of the interlock monitor switch to bring it under NO condition and presses the button of the secondary interlock switch to bring it under NO condition.

ADJUSTMENT :

Interlock monitor switch

When the door is closed, the interlock monitor switch should be changed (NO condition) before other switches are closed.
When the door is opened, the interlock monitor switch should be changed (NC condition) after other switches are opened.

(3) Adjustment steps

a) Loosen the mounting screw.
b) Adjust interlock switch assembly position.
c) Make sure that lock lever moves smoothly after adjustment is completed.
d) Tighten completely a mounting screw.

NOTE :

Microwave emission test should be performed after adjusting interlock mechanism. If the microwave emission exceed 4mW/cm^2, readjust interlock mechanism.

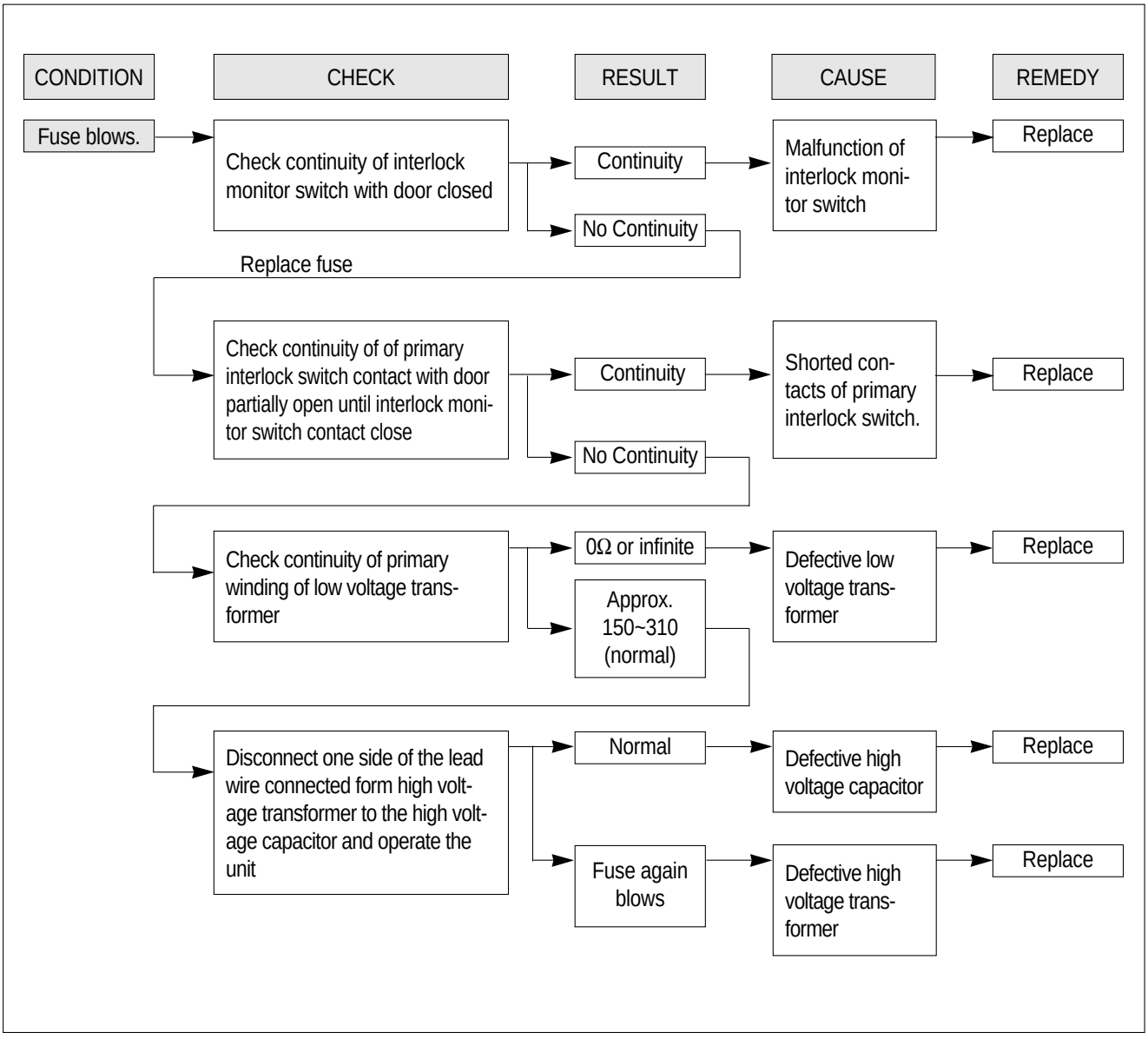
TROUBLESHOOTING GUIDE

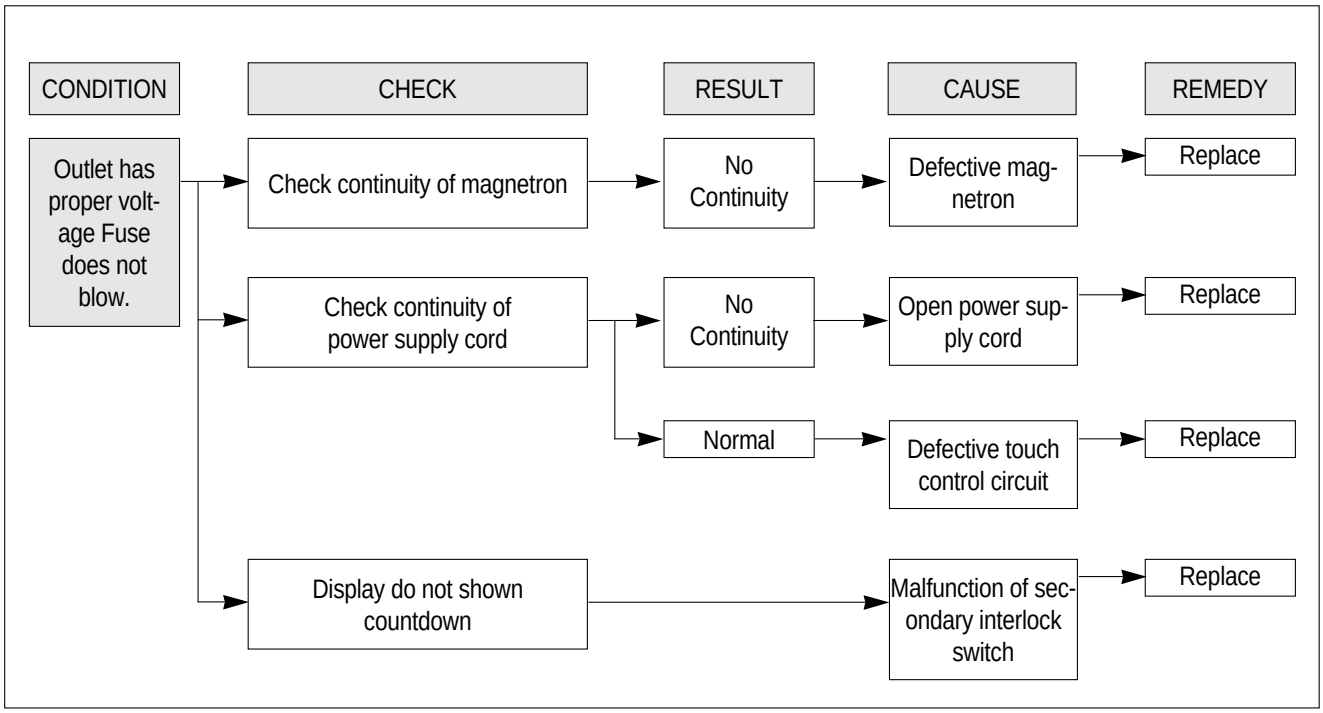
Following the procedure below to check if the oven is defective or not.

1. Check grounding before trouble checking.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor.
4. When checking the continuity of the switches, fuse or high voltage transformer, disconnect one lead wire from these parts and check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

NOTE : When electric parts are checked, be sure the power cord is not inserted the wall outlet.
Check wire harness, wiring and connected of the terminals and power cord before check the parts listed below.

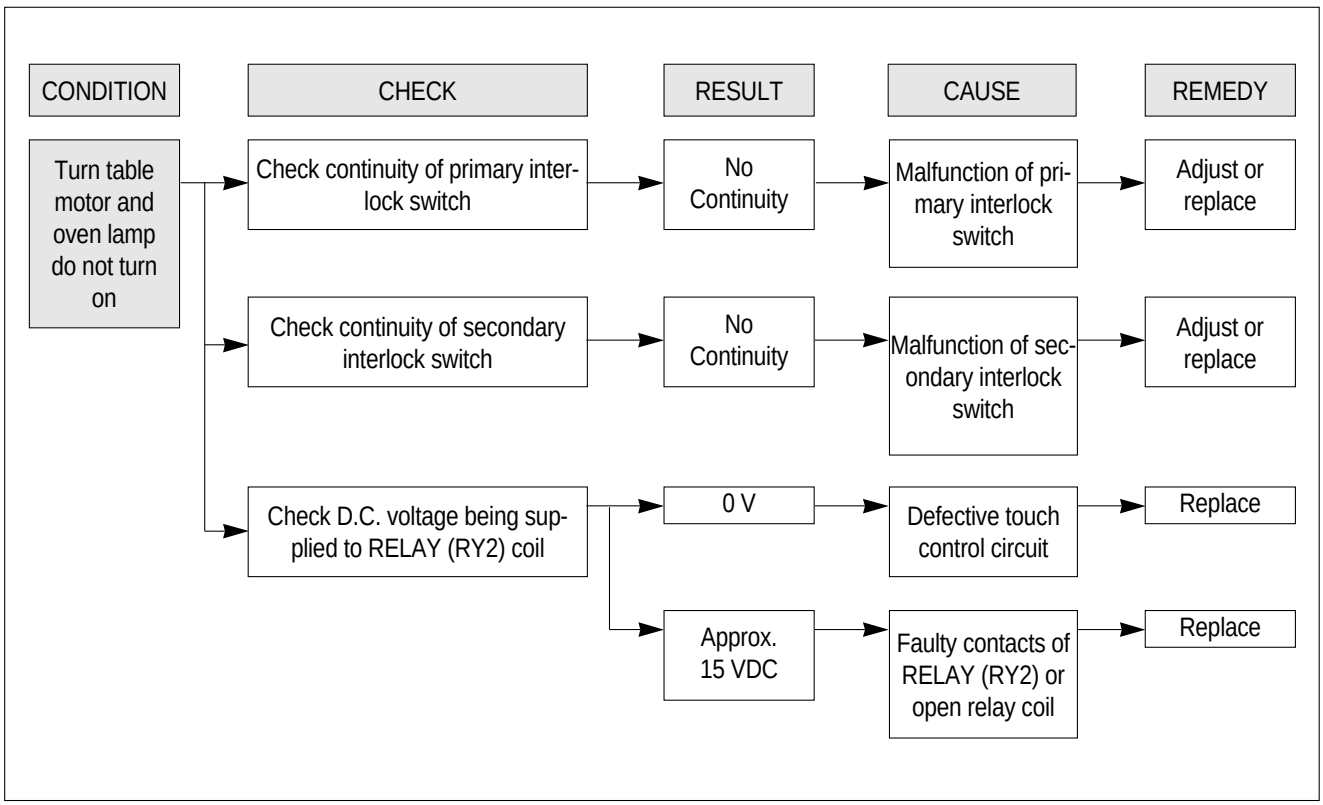
(TROUBLE 1) Oven does not operate at all ; any inputs can not be accepted.



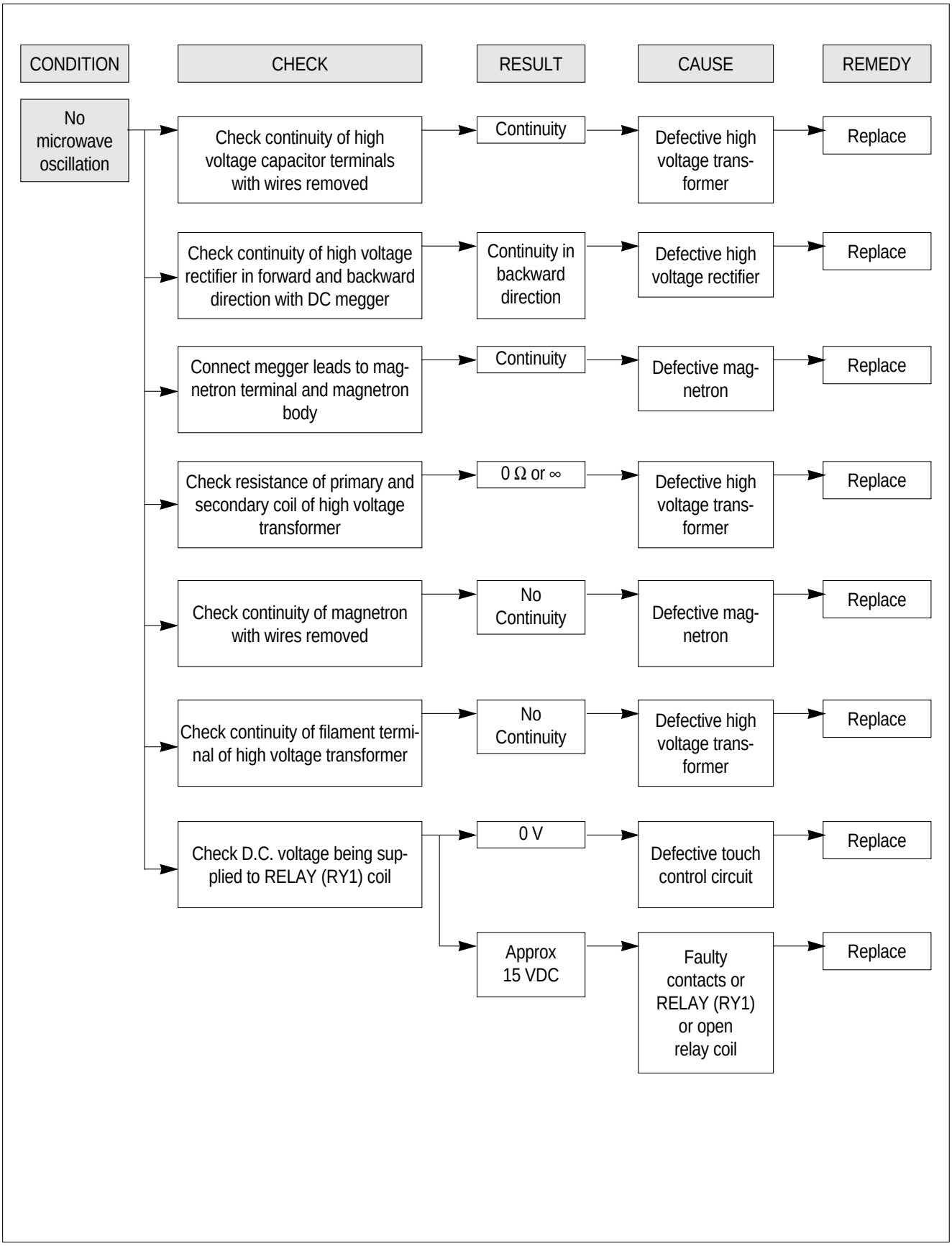


NOTE
All these switches must be replaced at the same time, please refer to “Interlock Mechanism And Adjustment”.

(TROUBLE 2) Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and start button is tapped.

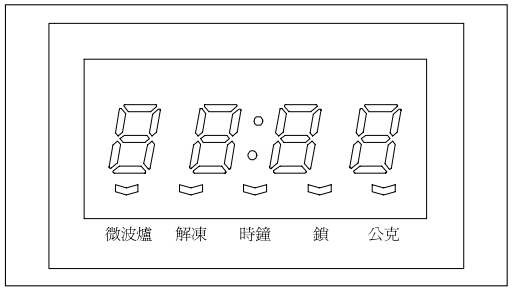


(TROUBLE 3) No microwave oscillation even though fan motor rotates.



(TROUBLE 4) The following visual conditions indicate a probable defective touch control circuit or membrane switch assembly.

1. Incomplete segments
   (1) Segments missing
   (2) Partical segments missing
   (3) Digit flickering other than normal display slight flickering
   (4) " :0" does not display when power is on.



2. A distinct change in the display is not on when they numbers in the display.

3. One or more digits in the display are not on when they should be.

4. Display indicates a number different from one touched.

5. Specific numbers (for example 2 or 3) will not display when the panel is touched.

6. Display does not count down or up with time cooking or clock operation.

7. Oven is programable and cooks normally but no display shows.

8. Display obviously jumps in time while counting down.

9. Display counts down noticeably too fast while cooking.

10. Display does not show the time of day when the STOP/CLEAR pad is touched.

11. Oven lamp and turntable motor do not stop although cooking is finished. Check if the RELAY 2 contacts close if they are close, replace touch control circuit.

CONDITION	CHECK	RESULT	CAUSE	REMEDY
Display does not show programming at all, even if keyboard is touched.	Check each pad for continuity of the membrane keyboard for the following key-board check procedure	Normal	Malfunction of control circuit board	Replace control circuit board
		Abnormal	Malfunction of the membrane keyboard	Replace the membrane keyboard

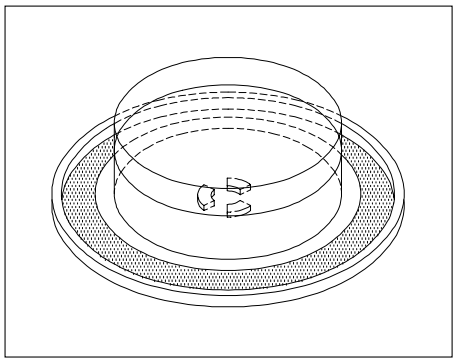
NOTE
Before following the particular steps listed above in the troubleshooting guide for the membrane key-board's, failure, please check for the continuity of each wire-harness between the membrane keyboard and P.C.B. assembly.

MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE



1. Microwave power output measurement is made with the microwave oven supplied at rated voltage and operated at its maximum microwave power setting with a load of 1000±5cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test.
   The initial temperature of the water is 10±2˚C (50±3.6˚F)
   It is measured immediately before the water is added to the vessel.
   After addition of the water to the vessel, the load is immediately placed on the center of the shelf, which is in the lowest normal position.
4. Microwave power is switched on.
5. Heating time should be exactly **A** seconds. (Refer to table as following)
   Heating time is measured while the microwave generator is operating at full power.
   The filament heat-up time for magnetron is not included.
6. The initial and final temperature of water is selected so that the maximum difference between the ambient and final water temperature is 5K.
7. The microwave power output P in watts is calculated from the following formula :

   $P=4187 \times \triangle T/t$

   • △T is difference between initial and ending temperature.
   • t is the heating time.
   The power measured should be B (Refer to SPECIFICATIONS)W±10.0%.

CAUTION :
1. Water load should be measured exactly to 1 liter.
2. Input power voltage should be exactly specified voltage(Refer to SPECIFICATIONS).
3. Ambient temperature should be 20±2˚C(68±3.6˚F)

Heating time for power output:

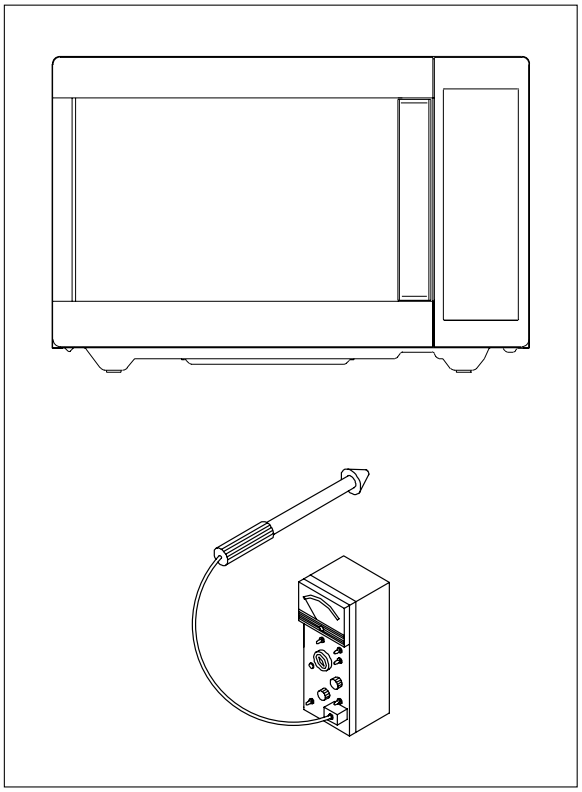
A(second)	70	64	60	56	52	49	47	44	42	40	38
B(W)	600	650	700	750	800	850	900	950	1000	1050	1100

2. MICROWAVE RADIATION TEST

CAUTION :
1. Make sure to check the microwave leakage before and after repair of adjustment.
2. Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
3. Do not place your hands into any suspected microwave radiation field unless the safe density level is known.
4. Care should be taken not to place the eyes in direct line with the source of microwave energy.
5. Slowly approach the unit under test until the radiometer reads an appreciable microwave leakage from the unit under the test.

PROCEDURES

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100˚C(212˚F).
2. Pour 275cc±15cc of tap water initially at 20±5˚C(68±9˚F) in the 600cc glass beaker with an inside diameter of approx. 95mm(3.5in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
   1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm^2.
   2) When measuring the leakage, always use the 5cm(2in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door seem, door viewing screen, the exhaust air vents and the suction air vents.
   3) Measuring should be in a counter-clockwise direction at a rate of 1 in./sec. If the leakage of the cabinet door is unknown, move the probe more slowly.
   4) When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 in. from any metal. If it does not, erroneous reading may result.



3. COMPONENT TEST PROCEDURE

- High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- It is neither necessary nor advisable to attempt measurement of the high voltage.
- Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.

1. High voltage transformer

(1) Remove connections from the transformer terminals and check continuity.
(2) Normal readings should be as follows:

Secondary winding	Approx. 140Ω±10%
Filament winding	Approx. 0Ω
Primary winding	Approx. 1Ω

2. High voltage capacitor

(1) Check continuity of capacitor with meter on the highest OHM scale.
(2) A normal capacitor will show continuity for a short time, and then indicate 10MΩ once the capacitor is charged.
(3) A shorted capacitor will show continuous continuity.
(4) An open capacitor will show constant 10MΩ.
(5) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

(1) Isolate the diode from the circuit by disconnecting the leads.
(2) With the ohmmeter set on the highest resistance scale measure the resistance across the diode terminals. Reverse the meter leads and again observe the resistance reading.
Meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read A normal diode's resistance will be infinite in one direction and several hundred KΩ in the other direction.

4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output".
Continuity checks can only indicate and open filament or a shorted magnetron.
To diagnose for an open filament or a shorted magnetron.
(1) Isolate magnetron from the circuit by disconnecting the leads.
(2) A continuity check across magnetron filament terminals should indicate 0.1Ω or less.
(3) A continuity check between each filament terminal and magnetron case should read open.

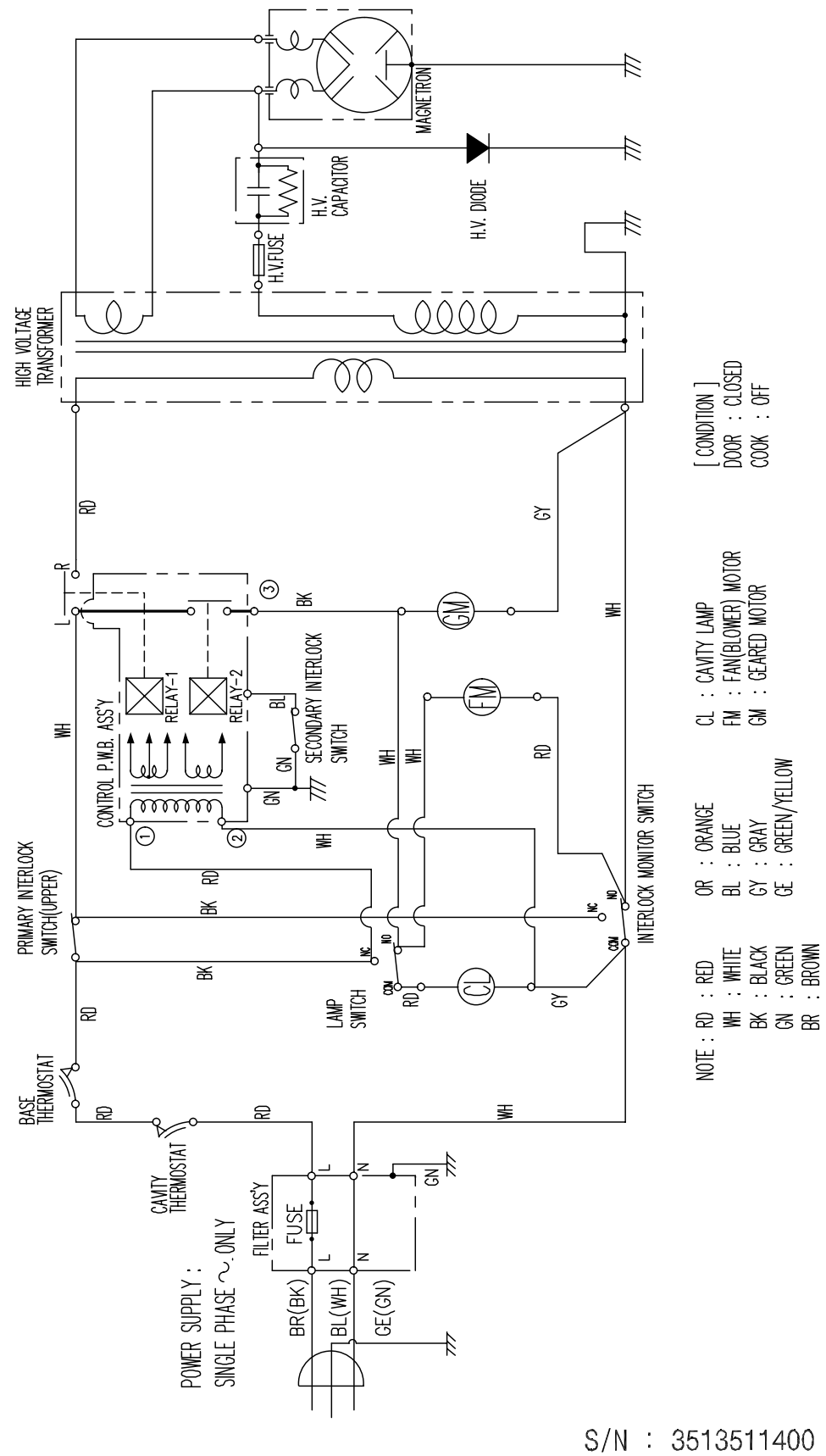
5. Fuse

If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse.
In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time.
Replace just the fuse if the switches operate normally.

6. Interlock switches

(1) You can test continuity of safety interlock and monitor switch by using ohmmeter.
(2) The switch peration is checked by zero/unlimited.
The meter should indicate zero resistance.
(3) The sequence of check is interlock monitor switch, primary and secondary interlock switches check.

WIRING DIAGRAM



PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1. Low Voltage Transformer check

• The low voltage transformer is located on the P.C.B.

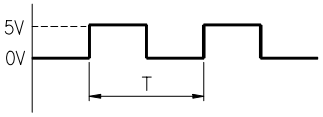
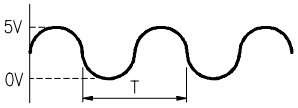
• Measuring condition: input voltage : 110V/Frequency : 60Hz

Terminal Voltage	LOAD	NO LOAD
5-6-7	AC 12.6 V	AC 14.7 V

NOTE :
1. Refer to Circuit Diagram (point 4).
2. Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.
3. The allowable tolerance of the secondary voltage is within ± 5% of nominal voltage.

2. Voltage check

• Key check point

NO	CHECK POINT	REMARK
1	IC 1 PIN 5	5 VDC
2	IC 1 PIN 8	 T:16.67ms(60Hz)
3	IC 1 PIN 35 OR PIN 36	 T:250ns(4MHz)

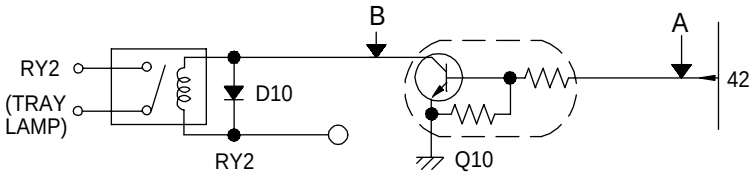
• Check method

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	DC 5V±0.25V	Replace VL1, EC1	NO LOAD
2	MP2	DC 12V±2.0V	Replace EC2, D11, D13, D14	NO LOAD

NOTE :
Each measure point must be measured with GND point.

3. When there is no microwave oscillation

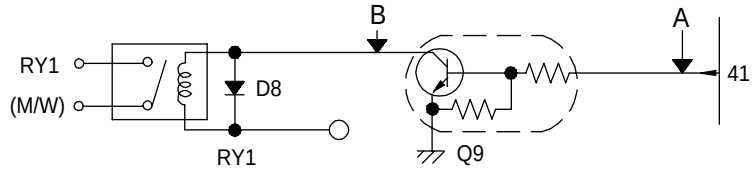
1) When touching **START** pad, oven lamp does not turn on.
Fan motor does not rotate, but cook indicator in display comes on.



- Check method

STATE \ POINT	A	B
RELAY 2 ON	5VDC	GND
RELAY 2 OFF	GND	12VDC

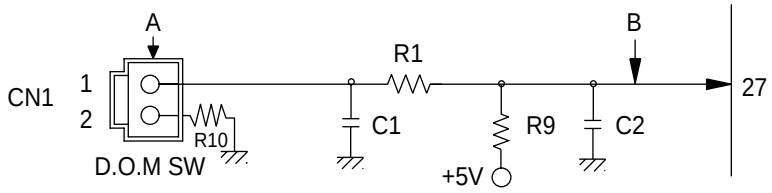
2) When touching **START** pad, oven lamp turns on.
Fan motor and turntable rotate and cook indicator in display comes on.



- Check method

STATE \ POINT	A	B
RELAY 1 ON	5VDC	GND
RELAY 1 OFF	GND	12VDC

4. When the door is opened during operation, the count down timer does not stop.

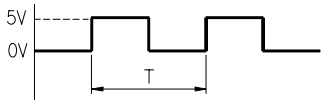


-Check method

STATE \ POINT	A	B
1) DOOR OPEN	OPEN	5VDC
2) DOOR CLOSED	CLOSE	GND

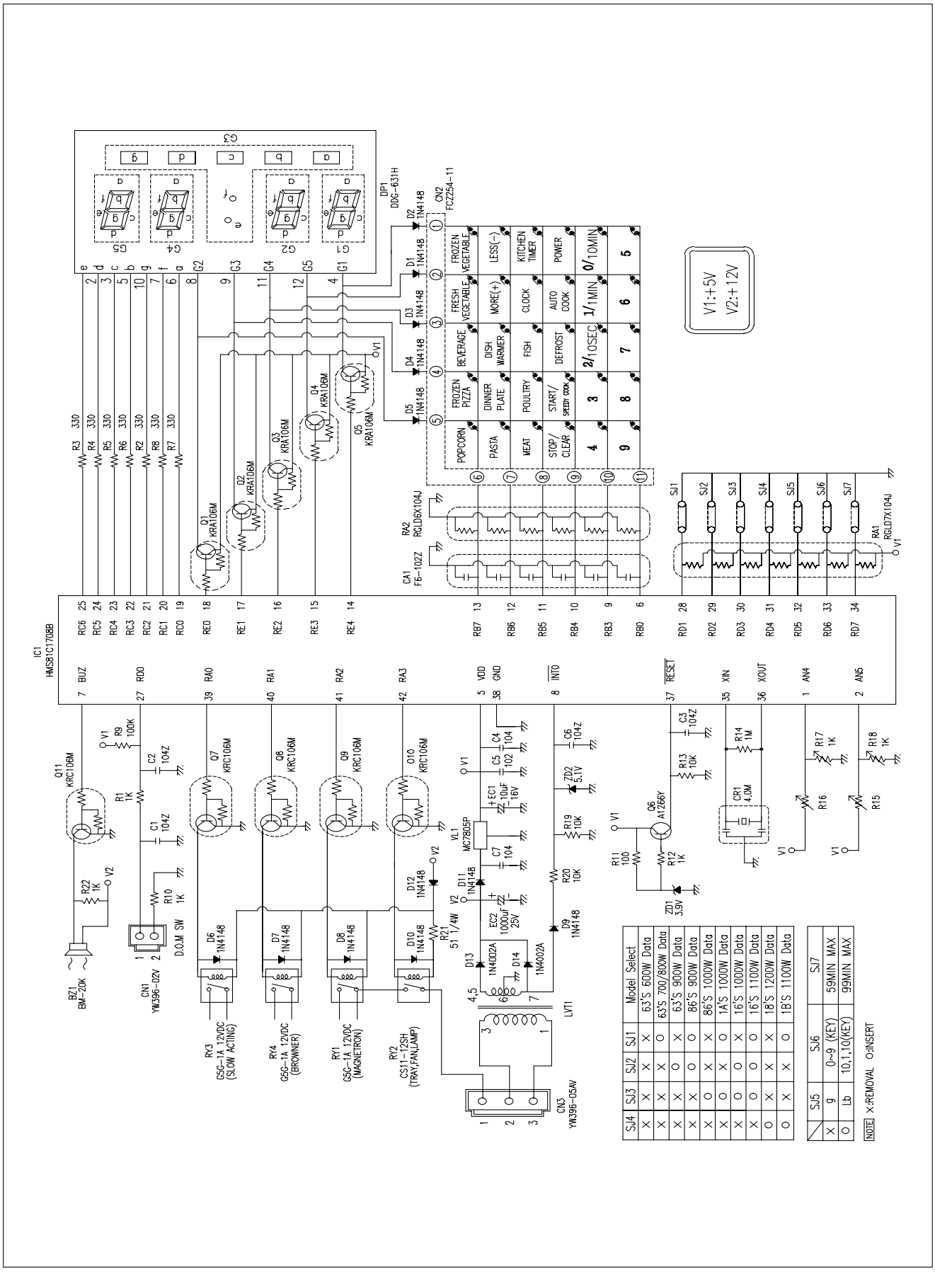
CHECK NO	METHOD	REMEDY
1	Check the stage (ON, OFF) of the door open monitor switch by resistance measurement.	Replace door open monitor switch.

5. When the digital clock does not operate properly.
→Refer to Circuit Diagram.

POINT	WAVE FORM
IC 1 PIN 8	 T:16.67ms(60Hz)

* If clock does not keep exact time, you must check resistor R20 and zener diode ZD2.

2. PCB CIRCUIT DIAGRAM



3. PCB LOCATION NO.

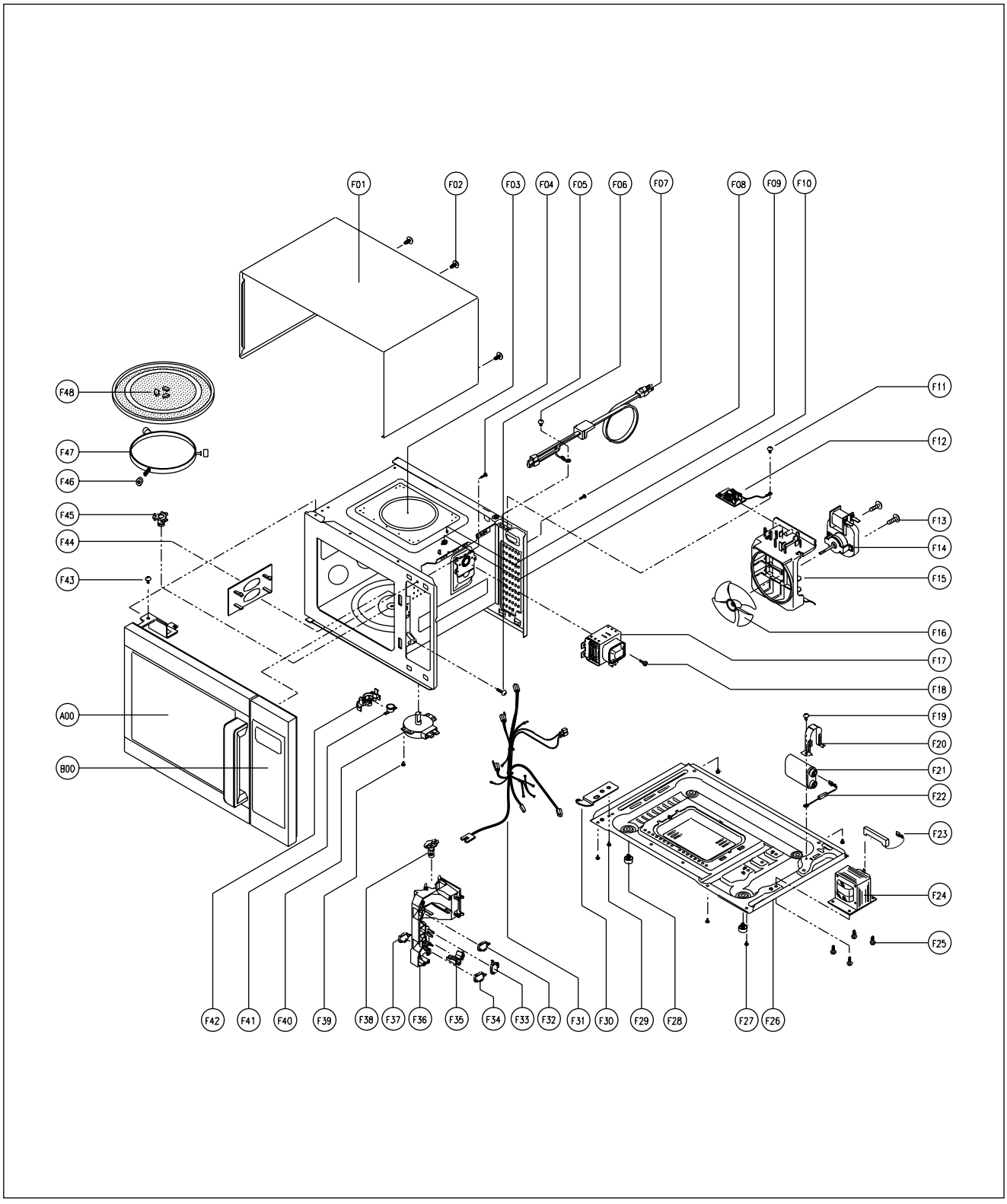
NO	NAME	SYMBOL	SPECIFICATION	PART CODE	Q'TY
1	BUZZER	BZ1	BM-20K	3515600100	1
2	C ARRAY	CA1	7P(6) 1000PF M 50V	CN6XB-102M	1
3	CAPACITOR ELEC	EC1	50V RS 10UF	CEXE1H100A	1
4	CAPACITOR ELEC	EC2	25V RSS 1000MF	CEXF1E102V	1
5	CONNECTOR WAFER	CN1	YW396-02V	3519150520	1
6	CONNECTOR WAFER	CN2	FCZ 254-11	441M367160	1
7	CONNECTOR WAFER	CN3	YW396-05AV	3519150510	1
8	DIODE RECTIFY	D1~5, D8~D12	1N4148	DZN4148---	10
9	DIODE RECTIFY	D13,14	KN4004A	DZN4004A--	2
10	DIODE ZENER	ZD1	UZ- 3.3BSB 1/2W	DZUZ3R3BSB	1
11	DIODE ZENER	ZD2	UZ- 5.1BSB 1/2W	DZUZ5R1BSB	1
12	LED DISPLAY	DP1	ELF-496GWB	DDDG631H--	1
13	PCB MAIN	M158-1	81.5X139.9	3514315411	1
14	R ARRAY	RA2	8P(7) 1/8 100K OHM J	RA-88X104J	1
15	R ARRAY	RA1	7P(6) 1/8 100K OHM J	RA-87X104J	1
16	RESISTOR	R2~8	1/6W 330 5%	RD-AZ331J-	7
17	RESISTOR	R1,10,12,17,18,22	1/6W 1K 5%	RD-AZ102J-	6
18	RESISTOR	R9	1/6W 100K 5%	RD-AZ104J-	1
19	RESISTOR	R11	1/6W 200 5%	RD-AZ201J-	1
20	RESISTOR	R13,R19,R20	1/6W 10K 5%	RD-AZ103J-	3
21	RESISTOR	R14	1/6W 1M 5%	RD-AZ105J-	1
22	RESISTOR	R21	1/4W 51 5%	RD-4Z510J-	1
23	RESONATOR CERA	CR1	CRT 4.00MS	5P4R00MTS-	1
24	IC REGULATOR	VL1	MC7805C	1CPMC7805C	1
25	TRANSISTOR	Q1~5	KRA106M	TZRA106M--	5
26	TRANSISTOR	Q9~11	KRC106M	TZRC106M--	3
27	TRANSISTOR	Q6	KTA-1266Y	TZTA1266Y-	1
28	CAPACITOR CERA	C5	102 50V Z AXIAL	CCZB1H102K	1
29	CAPACITOR CERA	C1~4,C6~7	104 50V Z AXIAL	CCZF1H104Z	6
30	TRANS POWER	LVT1	DMR-631FS	5EPU035302	1
31	WIRE COPPER	J1~J10,J13,J14	1/0.52 TIN COATING	85801052GY	12
32	WIRE COPPER	J11,J12	1/0.52 TIN COATING	85801053GY	2
33	SW RELAY	RY2	CS11-12SH 1C 1P	5SC0101128	1
34	IC MICOM	IC1	HMS81C1708B-HN017	150SR6N6Q-	1
35	WIRE COPPER	SJ1,SJ3,SJ7	1/0.52 TIN COATING	85801052GY	1
36	SW RELAY	RY1	G5G-1A DC12V	5SC0101121	1

EXPLODED VIEW AND PARTS LIST

1. DOOR ASSEMBLY
Refer to Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY
Refer to Disassembly and assembly.

3. TOTAL ASSEMBLY



✔ **Caution** : In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center .

NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
A00	3511711270	DOOR AS	KOR-1A7G9S	1
B00	PKCPSWA820	CONTROL-PANEL AS	KOR-1A7G9T	1
F01	3510805500	CABINET AS	KOR-1A1G0A LOUVER	1
F02	7112401011	SCREW TAPPING	T1 TRS 4 X10 MFZN	3
F03	3516110400	CAVITY AS	KOR-1A1G0A	1
F04	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1
F05	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1
F06	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F07	35113PANOA	CORD POWER AS	3X2.0 120X120 120-RTML	1
F08	7112401011	SCREW TAPPING	T1 TRS 4 X10 MFZN	1
F09	7121300611	SCREW TAPPING	T2S PAN 3X6 MFZN	1
F10	3518902600	THERMOSTAT	OFF:90 ON:60 H #187	1
F11	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F12	3518606600	NOISE-FILTER	DWLF-M17	1
F13	7121402511	SCREW TAPPING	T2S PAN 4X25 MFZN	2
F14	3963822730	MOTOR SHADED POLE	110V 60HZ MW10KA-M01	1
F15	3512517000	GUIDE WIND	PP	1
F16	3511800300	FAN	PP+30%GLASS	1
F17	3518002900	MAGNETRON	2M218J(F)P 6CF	1
F18	3516004000	SPECIAL SCREW	T2 BOLT FLANGE 5X12 DACRO	1
F19	7122400811	SCREW TAPPING	T2S TRS 4*8 MFZN	1
F20	3513003200	HOLDER HV CAPACITOR	SECC T0.6	1
F21	3518302201	CAPACITOR HV	2100VAC 0.98UF #187 75MM	1
F22	3518400900	DIODE HV	HVR-1X-3AB 12KV #187	1
F23	5F1C020315	FUSE	65TS 125V 20A	1
F24	3518113840	TRANS HV	DW-R11AT-1BT	1
F25	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4
F26	3510312400	BASE	SBHG T0.7	1
F27	7112401011	SCREW TAPPING	T1 TRS 4 X10 MFZN	5
F28	3512100900	FOOT	PP DASF-130	2
F29	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F30	3515202800	STOPPER HINGE *U AS	KOR-121M0A	1
F31	3512718080	HARNESS MAIN	KOR-1A7G9T	1
F32	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
F33	4415A66910	SW MICRO	VP-531A-OF/SZM-V16-FA-61	1
F34	3518571000	SWITCH PUSH	MP101C	1
F35	3513702610	LEVER LOCK	POM	1
F36	3513811710	LOCK	POM BLACK	1
F37	4415A66910	SW MICRO	VP-531A-OF/SZM-V16-FA-61	1
F38	3513601500	LAMP	BL 125V 25W T25 C5A H187	1
F39	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1
F40	3966820200	MOTOR SYNCRO	120V 2W GM-16-12F17	1
F41	3518905400	THERMOSTAT	OFF:90 ON:60 H #187 NB	1
F42	3513003410	HOLDER THERMOSTAT	PP(BK)	1
F43	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F44	3511406200	COVER WAVE GUIDE	HEATPROOF PP	1
F45	3517400620	COUPLER	XAREC	1
F46	3514701501	ROLLER	TEFLON D:14.5	3
F47	3512519300	GUIDE ROLLER	PP 5113MF6 A353B	1
F48	441X335A10	TRAY	BORO-S1 GLASS(NEG)	1

DAEWOO ELECTRONICS CORP.
686, AHYEON-DONG MAPO-GU SEOUL, KOREA
C.P.O. BOX 8003 SEOUL, KOREA
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CABLE: “DAEWOOELEC”

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